

August 2011

## SECTION III

### RANGE

#### PLANNING RESOURCE MANAGEMENT SYSTEMS (RMS)

Successful resource management on rangeland is the correct combination of practices that will meet the needs of the total range ecosystem, soil, water, air, plant, and animal resources, and the objectives of the land user.

In planning a Resource Management System (RMS) for rangeland, vegetation management (grazing management) is the foundation on which the RMS is built. **Prescribed Grazing** is essential to vegetation management. A grazing management plan that balances the forage and feed to the animal numbers, describes the animal movement through the pastures and meets the needs of the plants, animals, soil, water, and air is essential to the formulation of a RMS on rangeland. **Water** for the animals of concern must be provided, thus making natural water or watering facilities essential to a rangeland **RMS**.

All other practices planned on rangeland are to either (1) facilitate the application of the grazing management plan and are identified as **DESIRABLE** practices, or (2) cause or accelerate changes in the rangeland ecosystem and are identified as **NEEDED** practices. These **NEEDED** practices are planned when necessary to treat specific resource problems to meet the criteria for managing the soil, water, air, plant and animal resources.

Resource Management Systems include combinations of practices that are:

1. **ESSENTIAL** **Prescribed Grazing** and **water** for animals of concern are essential to successful management of rangeland and are always planned in the RMS.
2. **NEEDED** .These practices are planned when necessary to cause or accelerate changes in the rangeland ecosystem that cannot be achieved through application of vegetation management (**ESSENTIAL**) and facilitating (**DESIRABLE**) practices alone and are required to meet the RMS Quality Criteria.
3. **DESIRABLE** .These practices facilitate or enhance the vegetative management of rangeland.

An **RMS** is developed by selecting a combination of the **ESSENTIAL**, plus the **NEEDED** and/or **DESIRABLE** practices whose combined effects will meet the criteria established for each resource (soil, water, air, plant and animal) and objectives of the land user. When multiple land use is an objective, the needs of each use and the effects of each practice must be considered in the selection and application design of each practice to ensure compatibility. The following is a list of **ESSENTIAL** and **NEEDED** and/or **DESIRABLE** practices applicable to rangeland. The following list of practices is not all inclusive, there may be other practices appropriate for inclusion under **NEEDED** and/or **DESIRABLE** on a plan by plan basis or as technology changes.

**Table 1**

<b>ESSENTIAL RANGELAND PRACTICES</b>		
<b>Practice Name</b>	<b>Practice Code</b>	<b>Need</b>
<b>Prescribed Grazing</b>	528	
<b>Water</b> <sup>1</sup> (Natural Water or Watering Facilities)	614, etc.	

**Table 2**

<b>NEEDED and/or DESIRABLE Practices</b>	
<b>Practice Name</b>	<b>Practice Code</b>
Access Road	560
Animal Trails and Walkways	575
Brush Management	314
Critical Area Planting	342
Diversion	362
Fence	382
Firebreak	394
Grade Stabilization Structure	410
Grazing Land Mechanical Land Treatment	548
Herbaceous Weed Control	315
Integrated Pest Management	595
Pipeline	516
Pond	378
Pond Sealing or lining	521
Prescribed Burning	338
Pumping Plant for Water Control	533
Range Planting	550
Spring Development	574
Stream Crossing	578
Streambank and Shoreline Protection	580
Structures for Water Control	587
Upland Wildlife Habitat Management	645
Water Harvesting Catchments	636
Water Spreading	640
Water Well	642
Wetland Enhancement	659
Wetland Restoration	657
Wetland Wildlife Habitat Management	644
Wildlife Watering Facility	648
Windbreak Shelterbelt Establishment	380
Windbreak/Shelterbelt Renovation	650

<sup>1</sup> The first water in the pasture for animal use

### SECTION III RESOURCE MANAGEMENT SYSTEMS GUIDANCE DOCUMENT (EXAMPLE)

#### RESOURCE SETTING

MLRA 070C – Loamy, Shallow, and Bottomland Range Sited generally in fair condition, slight upward trend, grazed by cattle yearlong (cow/calf), Pronghorn Antelope are wildlife concern, ranch divided into 5 pastures.

#### RESOURCE PROBLEMS

SOIL: - Excess sediment yield from watershed, sheet and concentrated flow erosion.  
WATER: - Impaired surface water quality (turbidity) due to excess run-off  
AIR: - None identified  
PLANT: - Lack of cool season plant, unsuitable similarity index, low plant vigor, Juniper invasion  
ANIMAL: - Grazing distribution problems, forage/livestock imbalance, poor reproduction  
HUMAN: - None identified

		SOIL (Erosion)			WATER			PLANT			ANIMAL			HUMAN		
	Practice #	Sheet & Rill	Concentrated Flow		Ponding/ Flooding	Surface Water Qlty		Establishment ,Growth, & Harvest(low SD	Health and Vigor	Productivity (Brush Invasion)	Population/ Resource Balance	Food (Poor Reproduction )	Food for Wildlife	Profitability (long Term Sustainability )	Other: Cost Effectiveness	
<b>RMS #1</b>																
Prescribed Grazing	528	+	+		+	+		+	+	+	+	+		+	+	
Brush Mgt (Mech)	314	+	+		0	0		+	+	+	+	+		+	+	
Wildlife Hab Mgt	645	0	0		0	0		0	0	0	+	+	+	+	+	
<b>RMS #2</b>																
Prescribed Grazing	528	+	+		+	+		+	+	+	+	+		+	+	
Prescribed Burn	338	+	+		0	0		+	+	+	+	+		+	+	
Wildlife Hab Mgt	645	0	0		0	0		0	0	0	+	+	+	+	+	

(+) positive effect    (-) negative effect    (0) none or negligible effect    (f) facilitating practice    (n/a) practice not applicable